Executive Committee Report

Notes (SAP):

1. The Collaboration Policy (attached) was unanimously accepted by the collaboration meeting. Everyone is asked to fill out a Collaborator Form and return it to Kevin Coulter. A preliminary collaboration list is attached.

2. Integration issues urgently need to be addressed. It was agreed that LANL would follow up with updating the equipment diagrams on the web site with updated information. Dimensions are needed for the ^{3}He assembly, and updated dimensions for the CsI array.

3. **The next collaboration meeting** will be held in late July or early August 2002. TRIUMF was proposed as a site. We will poll the collaboration by email and establish a date within the next few weeks.

4. Commitments are needed for manpower to be at LANL next summer during the installation and commissioning phases of the experiment. To lead into the commissioning phase, we agreed on the establishment of working groups on key elements of the experiment. Everyone should sign up to work on at least one and no more than three groups. Initial plans will be presented at the next collaboration meeting. The working groups and initial memberships are listed under “Issues” at the end of this document.

npdGamma Collaboration List *(March 6, 2002)*

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T.B. Smith
University of Dayton

S.A. Page, W.D. Ramsay
University of Manitoba and TRIUMF

T.E. Chupp, K.P. Coulter
University of Michigan

M.B. Leuschner, W.M. Hersman
University of New Hampshire

Experimental Layout

Discussion Notes: (SAP)

It was generally agreed that:

1. The coils will be installed first, field map will be done, shimming adjusted, and then the coils will be removed for installation of the target.
2. The target must be tested in the cave area. Then the coils will be reinstalled, target pulled back, and CsI installed.
3. As a default policy, each item is allowed the floor space under its 'footprint' for a mounting stand.
4. CsI and LH_2 stands will be engineered together at TRIUMF after being inherited from preliminary designs at IU. CsI will be motorized for +/- 5 mm motion in x-y for calibration purposes.
5. The RFSF penetration into the CsI array needs to be resolved, as does the z-location of target. (David and Mike to sort out).
6. A collimator needs to be designed for the CsI array, to be mounted on the spin flipper (some shielding inside the spin flipper). David, Mike and Scott to sort this out.
7. We need another collimator to be mounted on the 3He oven assembly to define the beam that will be polarized by the 3He cells. Kevin and David to sort this out.
8. Magnetic materials are not to be allowed more than 20 cm above the floor level. Any concerns to be directed to Tom.
9. Dimensions, accurate drawings, etc. are urgently needed. All information to be sent to Seppo and Dan Davis.

Issues Identified During the Meeting and Actions to be Taken:

1. The laboratory proposes a move from 20 Hz to 30 Hz pulsed beam operation and will take a decision sometime in 2003-4. They seek input from us on the impact on our experiment. ***David and Seppo will respond.***

2. A new opportunity has arisen for about 2-3 weeks' access to a "mini-cave" in November-December 2002 for flux measurements with the new guide. ***Seppo and David will discuss this with the management and let us know about the timing etc.***

3. An MOU needs to be worked out between us and the experiment on the neighboring beamline which houses a large magnet, regarding the acceptable residual fields at our cave and actions to be taken in the event that they are higher than estimated (5 Gauss max.***) David and Seppo to work on this.***

4. The experiment needs a counting room! Nothing has been arranged yet. ***David and Seppo to negotiate with LANL.***

5. The dimensions of the beam openings on the chopper rotor blades need to be fixed. Should they be identical? ***Mark to decide ASAP and let us know.***

6. The time taken to read out the data should not interfere with valuable `beam off" time at the end of each pulse. We need 5 ms at the end of each pulse for beam off data. ***Greg to work out how to read the data out, probably at the start of the next pulse.***

7. Magnetic components can be dangerous. The vacuum photodiodes have magnetic pins. ***David is working out an estimate of the systematic error from polarized photon scattering off the pins.*** It may be necessary to demagnetize the pins. ***Shelley will work with Yasuhiro and figure out how to do this; Hamamatsu may have some suggestions.***

8. In general we agreed that no magnetic materials would be allowed more than 20 cm above the floor in the cave.

9. We need some long term ^{3}He manpower at LANL. ***David and Seppo are working on recruiting a postdoc with appropriate expertise.***

10. We need a supply of spare cells for the ^{3}He polarizer. ***Kevin et al will attempt to persuade NIST to try making some spare cells when the opportunity arises.***

11. The issue of shielding the CsI array from neutrons and gamma rays generated upstream needs to be worked out. This is coupled to how far the RFSF may penetrate into the CsI enclosure***. David, Mike and Scott to work this out.***

12. Mike presented a plan to order 46 new CsI crystals and use 2 refurbished by Bicron out of the 4 test crystals we had used at LANL in the past. After some discussion it was agreed to order 2 additional new crystals so that all are from the same batch for the experiments. ***Mike and Seppo to work out details and costing.*** *(Update: 3 more crystals have now been ordered!)*

13. Parameters to be included in slow monitoring of experimental conditions need to be specified and sent to Greg so that this capability is included in the DAQ***. Greg to bug people for info.***

14. Not much has happened yet with analysis software; we agreed in principle that everyone should have access to the data and analysis routines***. This will be worked on by the DAQ team.***

15. The target schedule and priority for technical support at IUCF was raised as a serious concern. ***Mark will take over the PLC controls project. TRIUMF/Manitoba will take over the CsI and target stand designs following initial specifications from IUCF. With this lightening of the load, Mike will seek support for full time engineering support for the target drawings and construction – political support from the collaboration will be sought if necessary.***

16. The shape and size of the guide field coils needs to be finalized. Tom needs to know which are the most important field gradients that need to be nulled out by the system. A scheme for installing the coils in the cave, around the apparatus, needs to be worked out. ***David and Kevin should send some information on the important field gradients to Tom ASAP for inclusion in his field simulations***.

17. The CsI stand should include the capability of remote controlled x-y motion with a range of about +/- 5 mm for use in calibrating the detector positions with beam. Also, we decided that some sort of installation rig needs to be designed so that the main CsI support frame can be installed and removed in one piece from a stationary base stand that sits on the floor. ***This will be included in the request for engineering assistance to TRIUMF.***

18. Neutron shielding and collimation to define the beam incident on the ^{3}He cell needs to be designed and incorporated in the ^{3}He assembly**.** ***Kevin and David to work this out.***

19. Manpower and students are urgently needed at LANL***!*** ***Everyone should plan on spending time at LANL next summer during setup and commissioning. University people should try to recruit graduate students.***

20.Careful thought needs to be given to all electrical penetrations into the cave to ensure that they do not introduce dangerous ground loops**.** ***Scott is the official ground loop police officer.***

21. The next collaboration meeting should be held before the end of the summer 2002. Late July or early August were suggested as dates. TRIUMF as a location. ***The Executive Committee will follow up with a poll on possible dates.***

22. **Commissioning teams** to work on installation, debugging, and be responsible for initial data taking and analysis in 2003 were outlined and subscribed to as follows:

- ***Guide field:*** *Kevin, Tom, Roger*
- ***Beam properties:*** *Greg, David, Mark, Des, Hermann, Mike*
- ***^{3}He/polarization****: Kevin, Seppo, Gordon, Shelley*
- ***Detector:*** *Mike, Michael, Shelley, David, Scott, Seppo, Des, Hermann, Yasuhiro*
- ***Target:*** *Mike, Michael, Shelley, Mark, Hermann, Seppo*
- ***Systematics:*** *Greg, Kevin, Dave, Mark, Mike*
- ***DAQ:*** *Greg, Mike, Vinny, Scott*

Not everyone has indicated their intentions yet! Please let Kevin Coulter know ASAP!

Follow up on the above issues is clearly needed. ***The Executive Committee will monitor progress between now and the next collaboration meeting.***